AR-NAFAKA Project Maize Based Systems Component: 2016–2017 Progress

Bright Jumbo (CIMMYT), Swai Elirehema, Freddy Baijukya (IITA), Anthony Kimaro (ICRAF), Zubeda Mduruma, Silvanus Mruma, Haroon Sseguya (IITA), Job Kihara (CIAT), Fred Kizito (CIAT), Chacha Watanga, Yangole Luhenda and Einothy Laizer

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Partners

- CIMMYT International Maize and Wheat Improvement Centre
- CIAT International Centre for Tropical Agriculture
- ICRAF World Agroforestry Centre
- ARI-Hombolo Agricultural Research Institute, Hombolo
- IITA International Institute for Tropical Agriculture
- NAFAKA Tanzania Staples Value Chain Activity
- AMINATA Quality Seeds
- SARI SELIAN agricultural Research Station
- Meru Agro Seed
- Agricultural Extension. Ministry of Agriculture

Summary description of key activities of Maize Based Systems Component

- Introducing improved crop varieties (maize, beans, groundnuts, soybean) to improve crop productivity in target sites
- Disseminate best bet agronomic management options to enhance crop productivity in target sites
- Introduce land, soil and water conservation technologies for sustainable use of land, soil and water in project sites.
- Community empowerment

Core Activities

- Introduce and promote improved varieties:
  - Maize, groundnuts, Soybean and beans
- Demonstrate the performance of organic and inorganic fertilizer in maize and legumes
- Demonstrate improved maize and legume varieties under good agronomic management practices
- Demonstrate appropriate in-situ soil and water conservation measures i.e. contour and tie ridges
- Demonstrate appropriate water harvesting and irrigation options

Table 1. Maize Varieties planted at various sites

	Variety	Source	Year Released	Maturity	Yield potential (t/ha)
1	TAN H600	TanSeed	2008	120 - 130 days	7-8 t/ha
†2	SAH638	SUBA AGRO	2012	120 - 130 days	8-13t/ha
3	TAN222	TanSeed			
†4	SAH636	SUBA AGRO	2012	120 - 130 days	8-13t/ha
5	NATA H104	AMINATA	2013	Intermediate (110 t0 120 days)	9
6	NATA H105	AMINATA	2013	Intermediate	9
7	NATA K6Q	AMINATA	2013	Early (90 to 110 days)	7
8	MAMS H913	MAMS	2013	110-120	8.5 -10
9	MERUHB513** Low N, DT variety	MERU AGRO	2013	110-120	7-10t/ha

Table 2: Legumes planted at various sites

Groundnuts	Groundnuts	Soybean
Pendo	Pendo	Line 8
Mnanje	Mnanje	

How would this plan work

- Conducting demonstration of selected technologies
- Conducting field days
- Conducting training

Criteria for selecting villages

- In line with the feed the future expectations, target numbers to be achieved
- Crop production area –
- Are they producing the crops we are trying to promote
- What scale is this crop being produced-in terms of importance is it a priority crop (value-food, cash, feed)
- Is it a crop they are already producing (We do not want to introduce the crop as a new crop)
- Visibility- close to the road
- Crop potential in terms of market access/ link
- Feed the future site where our partners (NAFAKA) already have network

Names of districts and Villages selected for mother and baby demonstrations in 2016

District	Babati	Kilosa	Kongwa	Kiteto	Mvomero	Kilolo	Mbozi	
			Village					Total
	Sabilo	Ulaya Kibaoni	Ndurugumi	Mbigili	Kwadoli	Utengule	Itumpi	
	Seloto	Ng`ole	Vihingo	Ngipa	Dihombo	Mtitu	Iyenga	
	Hallu	Kitete	Chang'ombe	Esiguta	Kigugu	Kitowo	Isansa	
	Quash	Madoto	Sagara 'A'	kiperesa	Msufini	Ng'uruhe	Magamba	
	Ayamango	Maguha	Lengaji	Kaloleni	Lukenge	Ukumbi	Iganya	
		Kambini	Ndalibo	Mwanya	Hoza			
					Mvomero			
					Kanga			
					Dihinda			
					Makuyu			
					Diburuma			
					Masimba			
					Salawe			
					Kunke			
					Kidudwe			
Total villages	5	5	6	6	15	5	5	47

Mother and baby demonstrations in the seven districts in 2016 vs targeted number of demos planned

District	Number mother demons	Target mother demos	Number baby demons	Target baby demos	Total number demons	Target total demos
Babati	9	5	118	125	127	130
Kilosa	6	5	947	125	953	130
Kongwa	6	5	107	125	113	130
Kiteto	6	5	177	125	183	130
Mvomero	26	5	187	125	213	130
Kilolo	14	5	308	25	322	30
Mbozi	16	5	272	25	288	30
Total	83	35	2116	675	2199	710

Field Days

	2015		2016				2017				
District	Number mother demons		Number mother demons	Number baby demons	Total number demons		Number mother demons	Number baby demons	Total number demons	Learners	Target
Babati	11		9	118	127		27	975	2309	11545	9375
Kilosa	5		6	947	953		10	4517	4527	22635	9375
Kongwa	5		6	107	113		15	1140	1155	5775	9375
Kiteto	5		6	177	183		15	1310	1322	6610	9375
Mvomero	6		26	187	213		30	125	155	775	9375
Kilolo			14	308	322		52	155	207	1035	9375
Mbozi			16	272	288		2394	2373	4766	23830	9375
Iringa Rural							38	90	128	640	1875
Total	25		83	2116	2199		2581	10685	14569	72845	67500

Mother and baby demonstrations across target districts in 2015, 2016 and 2017 and number of anticipated learners compared to 2017 target

	2015		2016				2017				
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Training

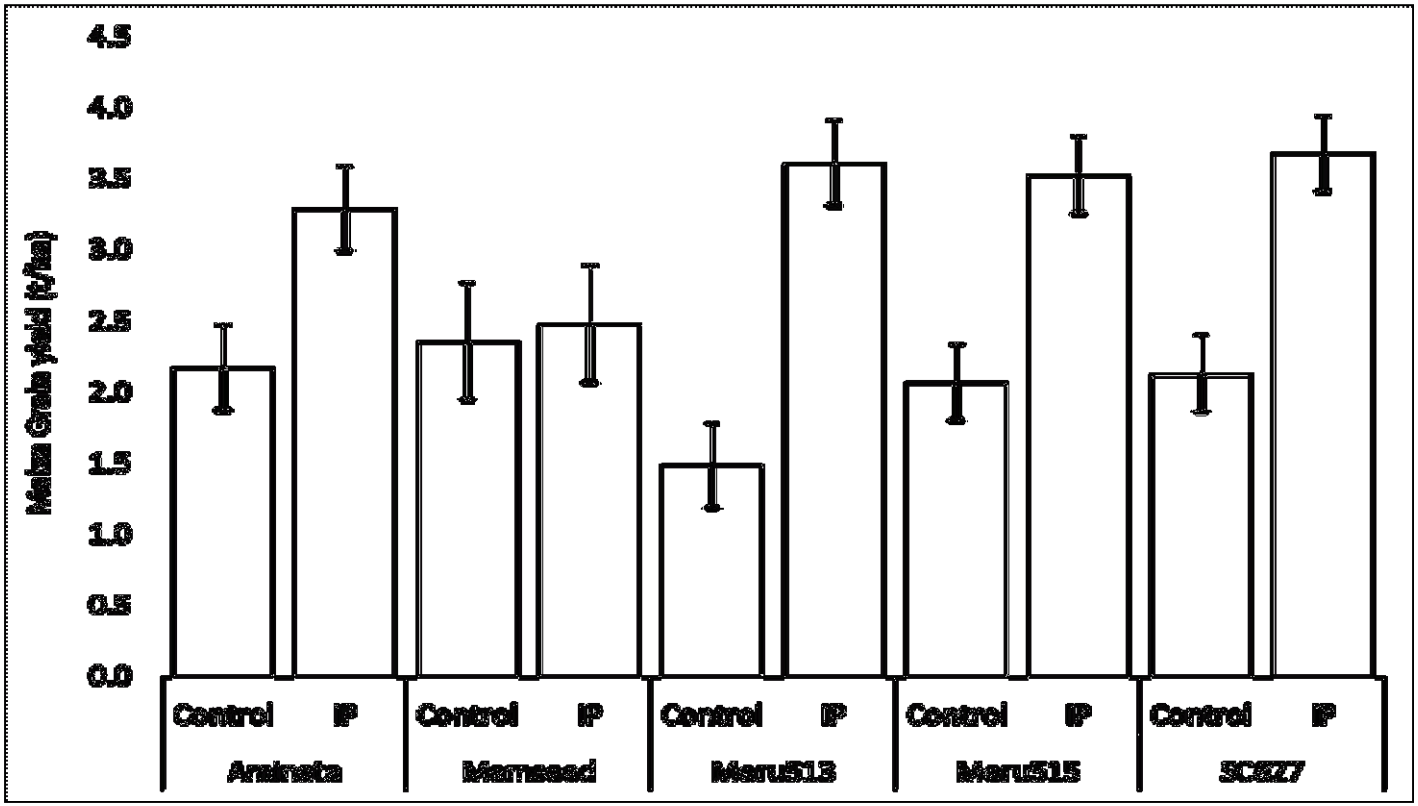
	2015/16				2017		
District	Trainees				Trainees		
	Male	Female	Total		Male	Female	Total
Mvomero	1753	1917	3670				
Mbozi	252	274	526		2406	2503	4909
Babati	701	301	1002		804	368	1172
Kilolo	194	114	308				
Kilosa	550	482	1032		77	88	165
Kongwa					896	1030	1926
Kiteto					588	771	1359
Total	3450	3088	6538		4771	4760	9531

Planning Meetings and Field Days

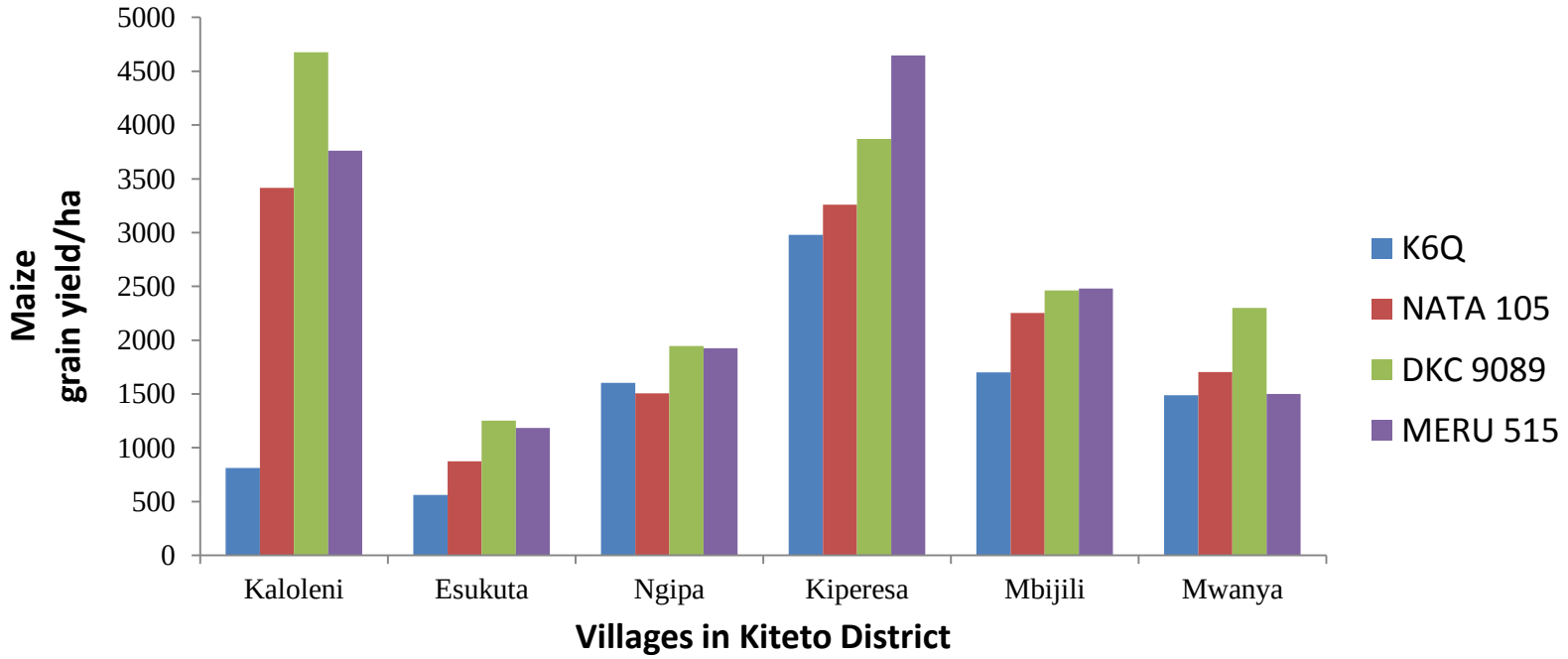
Where did we do best

- Successful establishment of demonstration plots across all target districts
- Training
- Field days

Key results - Babati

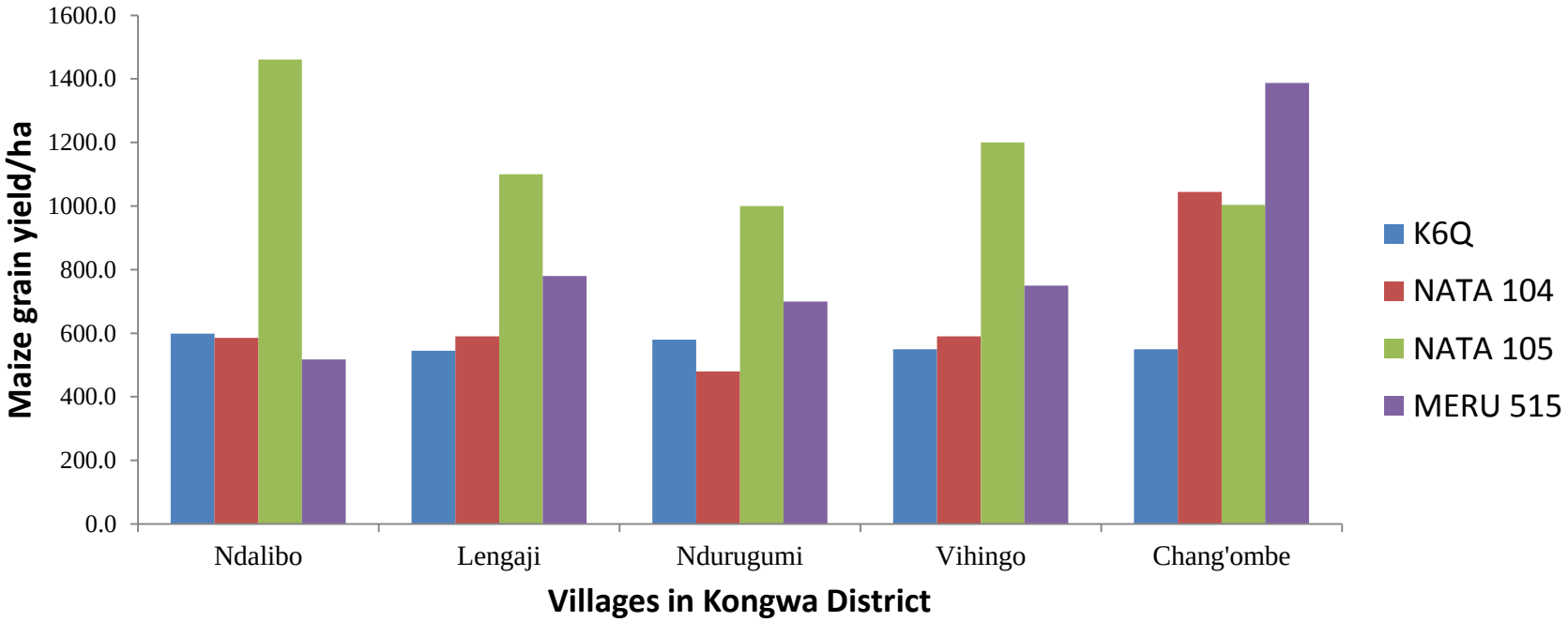


Key results- Kiteto



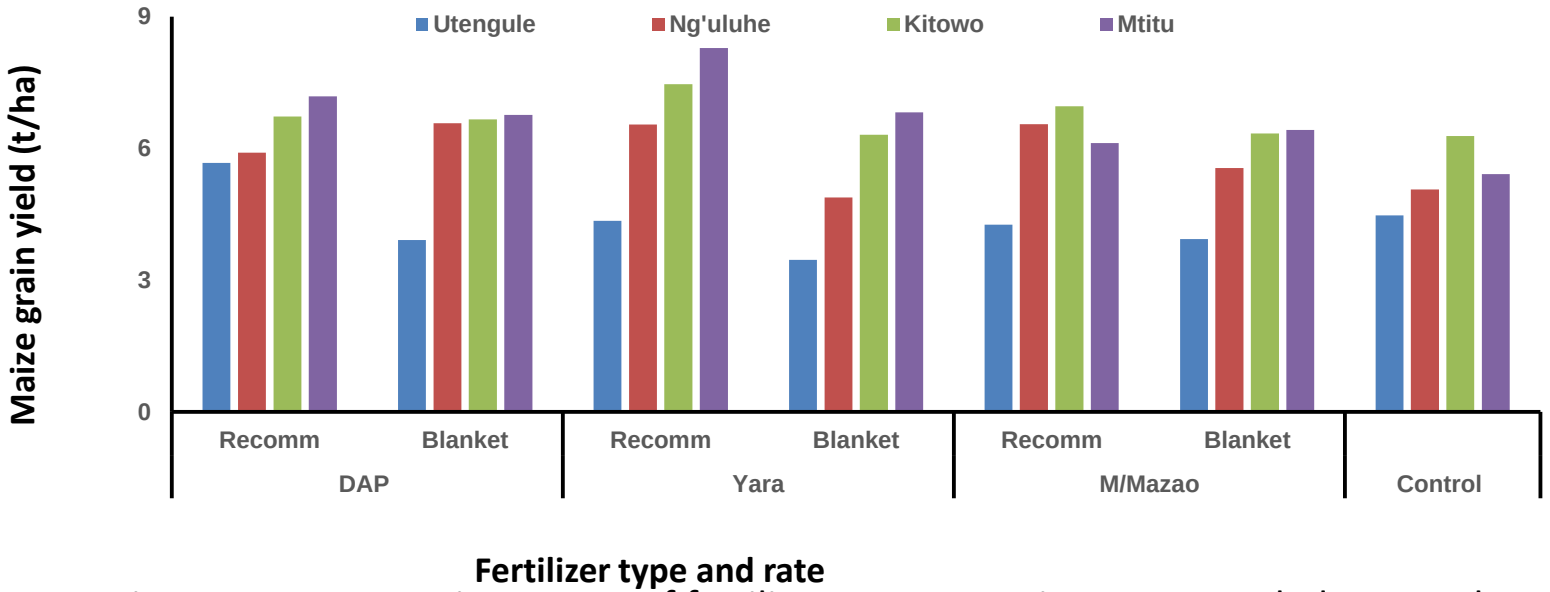
Mean maize grain yields under baby plots at Kiteto District

Key Results-Kongwa



Mean maize grain yields under baby plots in Kongwa District

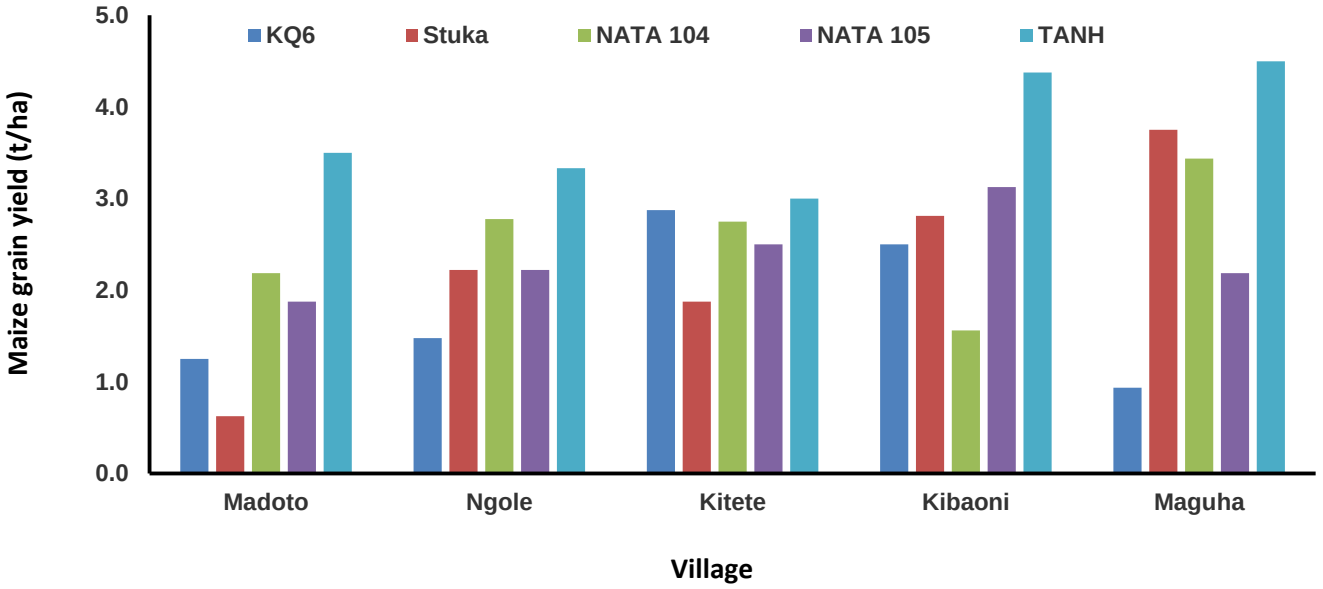
Key results-Kilolo



Maize response to various types of fertilizer at agronomic recommended rate and blanket rate in Mother Demonstrations in Kilolo District

Key results

- Kilosa



Other outputs

- Protocols for setting up demonstration plots for groundnuts, maize, beans, and soybean were developed and are in use.
- Field maps and field books available
- NAFAKA agronomists have been trained on implementation of demonstrations and the protocols to be used for setting up demonstration plots
- Extension staff have been trained
- Production guide- These have been developed but need to be finalized together with NAFAKA
- Recommending a stakeholder meeting that includes the Ministry of Agriculture to look at the draft
- ICT has been introduced in some project sites

Challenges

- Severe drought in Kongwa, Kiteto and babati
- Insect pests outbreak (Fall Armyworm)
- Operational challenges in sites where our partners such as NAFAKA are not present
- However this is addressed by engaging extension
- Theft of crops in the field (Maize)

Future Plans

- Conducting more Training
- Finish production guide
- Harvesting (collect data)
- This project has potential impacts but we need continued support to mature the implementation

Acknowledgement

- USAID for providing financial support
- All our valued partners for their support

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